WARFIGHTERS' SIMULATION (WARSIM) 2000
INTELLIGENCE
OPERATIONAL REQUIREMENTS

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1. Support the training of unit commanders and their intelligence staff components from battalion through theater level (Echelon Above Corps (EAC)) including Joint Task Forces training events in the field and in educational institutions.

2. Capable of providing collection management training and training support.

3. Capable of supporting intelligence requirements of large scale exercises (e.g., Ulchi Focus Lens and Atlantic Resolve).

4. Support exercises in which the training audience is comprised of only intelligence personnel using intelligence unit TO&E equipment. An example would be the 513th MI Brigade's Bold Knight exercise.

5. Provide an intelligence training environment capable of representing targets and collection assets from across the operational continuum.

6. Sensor simulation models that portray the joint and combined environment needed to support Army intelligence training events.

7. Software modules allowing the simulation to interoperate with simulators (e.g., IEWTPT) and live instrumented ranges and vehicles to expand the training environment for joint and combined force training exercises.

8. Portray the effects of ground, air and naval intelligence sources, collection and reporting operations on Army operations.

9. Portray those actions of the other services that affect the planning and execution of Army operations, e.g., air reconnaissance. A key example is the operation of intelligence collection assets from other services that have a critical impact on the planning and execution of Army operations.

10. Portray the products that national assets provide (National sources, collection, and reporting systems) at the appropriate echelon. An example is the flow of reports from the national HUMINT system.

11. Portray the products that allied assets provide at the appropriate echelon. An example is the provision of imagery from allied air-breather and commercial satellite collection systems.

12. Portray an entity level of detail which captures the signature of individual entities in engagements, battles and campaigns as appropriate to the collection systems. For example, this will require the simulation to deaggregate aggregate entities maintained in WARSIM for the purpose of displaying MTI or other signatures.

13. All systems shall be portrayed using performance data appropriate to the level of classification of the exercise.

14. Accommodate an exercise where different echelons (division, brigade, battalion) are interacting with the simulation.

15. Intelligence staffs using the simulation shall issue orders and instructions to the simulation through mission equipment, while receiving reports and data from all sources (i.e., JCMT).

16. The simulation shall receive and present its information in the format, mode and level of detail appropriate to the training unit.

17. The simulation shall accurately portray the impact that weather elements have on combat and intelligence operations (space, air and ground). These weather elements shall range from tropical to Artic regions, and shall be variable over the geographic area of interest, and shall be changeable as often as hourly.

18. The simulation shall account for the following weather elements:

a. Cloud amount and height
b. Visibility
c. Restrictions to visibility (e.g., precipitation, fog, smoke, dust and sand)
d. Precipitation accumulation
e. Surface wind direction and speed
f. Temperature
g. Relative humidity
h. Barometric pressure
i. Solar and lunar light data.

19. Communications shall be degraded as a function of extended ranges, equipment malfunctions, weather, time of day, network overload based on combat activities and equipment destruction by hostile acts.

20. Interact with other WARSIM modules or other connected communications simulation (e.g., Joint Electronic Combat - Electronic Warfare Simulation (JECEWSI)) for synchronization of communications degradation levels.

21. Portray the effects of electronic and information warfare on friendly and threat organizations' ability to function and carry out missions on the battlefield. This includes, but is not limited to, effects on friendly and enemy automated systems, communications**,** radar and intelligence operations.

22. The effects of precision munitions against specific targets shall be reflected in the portrayal of the targeted unit's capabilities and characteristics.

23. Leave an enduring impression on the battlefield, e.g., a unit that loses its accompanying radars due to damage shall show a change in its radar emissions and the terrain shall reflect the remains of the destroyed system.

24. Use flexible and responsive communications gateways to organizational systems to include secure terrestrial and satellite media for transmitting appropriate voice, data, facsimile, and video between simulation elements, and to remote locations involved in training exercise.

25. Allow training support personnel to make changes in scenarios, input parameters, rules, message formats, network structures, etc., during an exercise with minimal disruption to the exercise.

26. Link with simulators such as a Joint Surveillance Target Attack Radar System (JSTARS) emulator, IEW Tactical Proficiency Trainer, DIS-compliant prototype simulators, and instrumented ranges.

27. System operators can allow units of simulators to enter and leave the simulation environment withut disrupting the training exercise.

28. Allow intelligence unit trainees to use their organizational systems for all incoming and outgoing communications and data transfer with the simulation.

29. Completely integrate each component of the organizational systems from tactical through the operational level, e.g., UAVs, CI agents, and ASAS.

30. Send and receive information in the appropriate format or display mode via the media or means employed by the appropriate system (e.g., UAV output should be in video form, and messages from a SIGINT collection shall be electronic ASCII data transmission).

31. Provide several types of secure terrestrial and satellite communications support for training exercises, such as Defense Secure Network (DSNET).

32. Use, manipulate, input data to, and extract data from a variety of databases to include Army organizational system databases, DODIIS databases, other US or allied intelligence community databases used by Army intelligence units, and standard army management information systems using standard Commercial or Government Off-the-Shelf database management systems.

33. Data manipulation shall include approved means of changing classification. For example, if fixed facilities information is loaded into the database, but the exercise does not want to use real BE numbers, then a quick way of changing to generic unclassified data must be provided.

34. Archive data to meet an intelligence unit's specific training objectives. This information includes the scenario databases and any other information available to support the AAR requested by the unit, the Center for Army Lessons Learned, and the Battle Command Training Program (BCTP).

35. Data shall be archived with respect to time in order to facilitate examination of the dynamics of intelligence collection activities during the battle.

36. The system shall archive data needed for verification, validation, test, and evaluation.

37. Capable of operating and producing reports in an unclassified mode.

38. Capable of transmitting classified data over the distributed network.

39. Use classified data as a part of the model parameters in a classified database, media storage, and purging of classified data from systems.

40. Deny unauthorized users.

41. Required classification levels include unclassified, secret, and top secret-sensitive compartmented information (SCI) for intelligence models and reports..

42. Include intelligence unique tools to facilitate AAR for intelligence personnel. These tools should include, but are not limited to, displays of intelligence collection coverage at any point in the simulation, the ability to display the battlefield as sensed by the modeled collection systems compared to ground truth, and displays of errors or mistakes induced by the system.

43. Accomodate the intelligence requirements for an artificially intelligent "thinking" or live OPFOR. The level of intelligence should be sufficient to drive the OPFOR intelligence for BCTP division WFXs through theater level exercises.

44. Permit modification of sensor parameters to allow for technological advancement.

45. Provide for intelligence collection against and by OPFOR and gray clandestine and or covert organization's apparatus.

46. Provide for simulation of political, economic and infrastructure information.

47. Provide intelligence simulation support to military operations other than war (e.g., disaster relief, military assistance to civil disturbance, peacekeeping/peacemaking, non-combatant evacuation, counter-drug and counter-terrorism operations).

APPLICABLE DOCUMENTS

Specifications, Standards, and Handbooks

ARTEP 34-145-MTP	Military Intelligence Battalion (Division and Corps)
ARTEP 34-145-MTP	Military Intelligence Brigade Staff, Corps, and Airborne Corps
FM 34-1	Intelligence and Electronic Warfare Operations
FM 34-2	Collection Management and Synchronization Planning
FM 34-3	Intelligence Analysis
FM 34-8	Combat Commander's Handbook on Intelligence
FM 34-10	Division Intelligence and Electronic Warfare Operations
FM 34-25	Corps Intelligence and Electronic Warfare Operations
FM 34-25-3	All-Source Analysis System and the Analysis and Control Element
FM 34-37	Echelons Above Corps (EAC) Intelligence and Electronic Warfare Operations
FM 34-54	Battlefield Technical Intelligence
FM 34-80	Brigade and Battalion Intelligence and Electronic Warfare Operations
FM 34-130	Intelligence Preparation of the Battlefield (IPB)
FM 100-60	Armor- and Mechanized-Based Opposing Forces (OPFOR): Organization Guide
FM 100-61	Armor- and Mechanized-Based Opposing Forces (OPFOR): Operational Art
FM 100-62	Armor- and Mechanized-Based Opposing Forces (OPFOR): Tactics

FM 100-63	Infantry-Based Opposing Force (OPFOR): Organization Guide
FM 100-64	Infantry-Based Opposing Force (OPFOR): Operations and Tactics
FM 100-65	Opposing Force (OPFOR): Equipment Guide
FM 100-66	Opposing Force (OPFOR) in Operations Other Than War (OOTW): Organizations and Tactics
TRADOC Pams 350-12-17	OPFOR Handbook Series (soon be be Army FMs 100-60-68)
TC 34-10-20-1/2	Military Intelligence Collective Training Standards Document (Vol 1 and 2)
JCS Pub. No. 6-04	U.S. Message Text Formatting Program

Other Government Documents and Publications

CCTT 086.237.001	TACSIM Operations Manual (Vol I), Simulation Operations (D94W-94)
CCTT 086.237.001	TACSIM Operations Manual (Vol II), Scenario Database Preparation (D95W-94)
CCTT xxx.xxx.xxx	TACSIM Troubleshooting Guide (D-91W-94)
CCTT 086.237.001	TAARUS Users/Operators Manual (D-72W-93)
CCTT 086.237.001	TALON/TAARUS to TACSIM Interface Control Document (D-90W-94)
CCTT xxx.xxx.xxx	System Administration Manual for TALON and TAARUS (D84W-94)
CCTT 086.237.001	TALON Users/Operators Manual (D73W-93)
CCTT 086.237.001	DMMAIN Users Manual (D98W-94)
CCTT xxx.xxx.xxx	TUP Users/Operators Manual (D96W-94)

CCTT xxx.xxx.xxx	TUP II Users/Operators Manual (D97W-94)
CCTT xxx.xxx.xxx	TACSIM 2000 Migration Strategy
CCTT xxx.xxx.xxx	TACSIM - ALSP Interface Control Document

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RECOMMENDED WARSIM SRD INTEL BOS PARAGRAPH 3.2.1.14.1

Intelligence BOS (Sources, Collection, and Reporting)

The intelligence BOS requirements are specifically associated with intelligence sources, collection systems, and subsequent intelligence product dissemination. The WARSIM intelligence module shall portray a wide variety of threat systems, doctrine, organizations, and activities at the classification level appropriate to the training event (i.e., unclassified to system high). WARSIM must be capable of representing full-dimensional operations. Threats shall span the operational continuum across the full range of possible operations in war and operations other than war.

The system shall accept collection missions and provide the data output that is appropriate to the collection system being simulated or provide the data required to stimulate a simulator (e.g., IEWTPT) to provide the data appropriate to a collection system. In the case of intelligence sensors, the system shall provide the raw data that would normally go from the collection system (e.g., interrogator or tactical SIGINT collector) to the analytic activity for aggregation and analysis. Examples of this type of data include target location data, moving target indicators (MTIs), radar mappings, results of tactical interrogations, and communications intercept data. In the event that collection from a superior echelon is not available, the WARSIM intelligence module shall provide data suitable for a fusion system (e.g., ASAS) or pre-processor (such as Common Ground Station) as it would arrive from ground, air, maritime, EAC or allied units.

The intelligence module must be fully consistent with the wider WARSIM, the training requirements of the information age MI Corps and must accurately reflect the real-world operational constraints of intelligence operations in a joint and combined multi-echelon force projection environment. WARSIM must facilitate the effective vertical training of MI assets (e.g., feed IEWTPT architecture) and the integraion of the IEW BOS with the other BOSs.

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PURPOSE: State Intelligence Specific Requirements for WARSIM

ASSUMPTIONS:

The WIM requirements will be fully integrated as the intelligence module of WARSIM. It will be the same architectural structure as the other BOS modules within the WARSIM system.

The WARSIM training requirement for Intelligence is no different than other Battlefield Operating Systems (BOSs) in the requirement to support MOS specific training, standard operating procedure training, evaluation of tactics and techniques through training exercises, and as a planning tool for contingency operations course of action analysis.

The requirement is for all WARSIM BOS modules to be automated when training in a specific BOS is conducted (i.e., Intelligence only, ADA only, FA only, AVN only, etc.).